

REMARKS

Upon entry of this amendment, claims 6, 13, 16 and 17 are all of the claims pending in the application. Claims 1, 3, 7-12, 14, 15, 18 and 19 have been canceled by this amendment.

I. Claim Rejections under 35 U.S.C. § 103(a)

Claims 1, 3 and 6-19 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Chen et al. (US 2003/0098829) in view of Wei et al. (US 5,723,950).

Regarding claims 1, 3, 7-12, 14, 15, 18 and 19, as noted above, these claims have been canceled by the present amendment.

Regarding claim 13, Applicants note that this claim has been amended to recite the features of an inverter positioned between the lighting strobe signal terminal and the second switching element, the inverter turning off the second switching element when the lighting strobe signal indicates that the first switching element is turned on, and the inverter turning on the second switching element when the lighting strobe signal indicates that the first switching element is turned off, wherein a residual electric charge in the organic electro luminescence element is charged when the first switching element is turned on, the second switching element is turned off, and a DC forward voltage is applied to the organic electro luminescence element, and wherein the residual electric charge in the organic electro luminescence element is discharged when the first switching element is turned off and the second switching element is turned on, and after the application of the DC forward voltage to the organic electro luminescence element is stopped, the discharge of the residual electric charge resulting in a reverse current that is fed to the organic electro luminescence element through a defective part of the organic electro

luminescence element, the defective part of the organic electro luminescence element having a low resistance.

Applicants respectfully submit that the combination of Chen and Wei does not teach or suggest the above-noted features recited in amended claim 13.

With respect to the above-noted features set forth in amended claim 13, Applicants note that the purpose of the claimed invention is to “burn off” a defective part of an organic electro luminescence element by means of reverse bias, with the reverse bias being applied by using the charge accumulated in the electro luminescence element, rather than by using a dedicated power source. By using the charge accumulated in the electro luminescence element for the reverse bias, instead of using a dedicated power source, Applicants note that it is possible to provide a lighting emitting device having very little age deterioration (e.g., see Figs. 4 and 5 of the present application, and the description thereof at page 13, lines 13-17 of the original specification).

In this regard, Applicants note that the above-noted effects which are provided by the claimed invention can be realized only by short-circuiting both ends of the electro luminescence element concurrently with stopping the lighting of the electro luminescence element (using the claimed push-pull circuit), and then instantly discharging the charge accumulated in the electro luminescence element.

With respect to the Wei reference applied in the Office Action, Applicants note that the Examiner has indicated that “Fig. 2 [of Wei] describes a common condition in which transistor 30 is ON throughout the entire time period depicted in Fig. 2 on sheet 1 of 2” (see Office Action at page 3, lines 1-3). Applicants provide the following comments regarding this position taken by the Examiner.

In Wei, it is described that the “[t]ransistor 30 has a control terminal connected to receive a row logic signal thereon from an input terminal 31 when the row containing LED 11 is being addressed” (see col. 4, lines 47-49). Applicants note that this description means that when LED 11 is lighted, the “High” logic signal is applied to LED 11 from the terminal 31.

In addition, Applicants note that Wei indicates that “[w]hen both the column and row logic signals are applied to terminals 23 and 31, respectively, a current ‘I’, illustrated by waveform 35 in Fig. 2, is applied to LED 11” (see col. 4, lines 50-52). Applicants note that this description means that the state T0-T1 shown in Fig. 2 can be formed only when both the column and row logic signals are applied to the terminals. One of transistors 20 and 30 is turned OFF in other state (except the state T0-T1), and at least transistor 30 is turned OFF according to the description in col. 4, lines 47-49.

Thus, contrary to the above-noted position taken by the Examiner, Applicants respectfully submit that the transistor 30 of Wei is not ON throughout the entire time period depicted in Fig. 2.

As described above, in order to achieve the purpose of the present application, which is to “burn off” the defective part of the organic electro luminescence element by means of reverse bias, both ends of the electro luminescence element must be short-circuited at the time of extinguishing the electro luminescence element. In Wei’s circuit, when the transistor 30 is turned ON and the transistor 21 is turned ON at the same time of extinguishment (time T1), the purpose could be achieved by Wei. If such a purpose was achieved in Wei, however, I_D 37 (as shown in Fig. 2) would instantly become 0 at time T1. In this regard, because Wei shows that I_D does not instantly become 0 at time T1, but instead, gradually becomes 0 after a certain period of

time, it is clear that the transistor 30 in Wei is turned OFF after time T1, and I_D flows through the resistance between the source and the drain (i.e., “operates as a current sink”, see col. 4, lines 46-47).

Thus, in Wei, Applicants note that the circuit depicted therein does not “burn off” a defective part, and that there is clearly no suggestion or motivation in Wei to do so. In a similar manner, Applicants note that Chen also is not directed to the “burning off” of a defective part, and includes no suggestion or motivation to do so, but instead, merely discloses the use of a current driven pixel circuit having a plurality of transistors 31-34 and an LED 36.

In view of the foregoing comments, Applicants respectfully submit that the combination of Chen and Wei does not teach, suggest or otherwise render obvious the above-noted features recited in amended claim 13, which have a purpose of “burning off” a defective part, the features being an inverter positioned between the lighting strobe signal terminal and the second switching element, the inverter turning off the second switching element when the lighting strobe signal indicates that the first switching element is turned on, and the inverter turning on the second switching element when the lighting strobe signal indicates that the first switching element is turned off, wherein a residual electric charge in the organic electro luminescence element is charged when the first switching element is turned on, the second switching element is turned off, and a DC forward voltage is applied to the organic electro luminescence element, and wherein the residual electric charge in the organic electro luminescence element is discharged when the first switching element is turned off and the second switching element is turned on, and after the application of the DC forward voltage to the organic electro luminescence element is stopped, the discharge of the residual electric charge

resulting in a reverse current that is fed to the organic electro luminescence element through a defective part of the organic electro luminescence element, the defective part of the organic electro luminescence element having a low resistance.

Accordingly, Applicants respectfully submit that amended claim 13 is patentable over the cited prior art, an indication of which is kindly requested. Claims 6, 16 and 17 depend from claim 13 and are therefore considered patentable at least by virtue of their dependency.

II. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited.

If any points remain in issue which the Examiner feels may best be resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The Commissioner is authorized to charge any deficiency or to credit any overpayment associated with this communication to Deposit Account No. 23-0975.

Respectfully submitted,

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